

## PATENT COOPERATION TREATY

PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY


(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 10 APR 2006

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Applicant's or agent's file reference 0000055728/MUE		<b>FOR FURTHER ACTION</b>		See Form PCT/PEA/416
International application No. PCT/EP2004/013937		International filing date (day/month/year) 08.12.2004		Priority date (day/month/year) 10.12.2003
International Patent Classification (IPC) or national classification and IPC D21H21/10, D21H17/55, D21H17/56, D21H17/67, D21H17/68				
Applicant BASF AKTIENGESELLSCHAFT et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 1 sheets, as follows:</p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand  15.09.2005		Date of completion of this report  07.04.2006		
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer  Naeslund, P  Telephone No. +49 89 2399-8614		



**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/EP2004/013937

**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
    - ☐ international search (under Rules 12.3 and 23.1(b))
    - ☐ publication of the international application (under Rule 12.4)
    - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements**\* of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-24 as originally filed

**Claims, Numbers**

4, 5 as originally filed

1-3 received on 15.09.2005 with letter of 14.09.2005

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
  - ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
  - ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	2,3
	No: Claims	1
Inventive step (IS)	Yes: Claims	NONE
	No: Claims	1-3
Industrial applicability (IA)	Yes: Claims	1-3
	No: Claims	NONE

2. Citations and explanations (Rule 70.7):

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

Reference is made to the following documents:

D1: DE-A-4032660

D2: JP-A-402006685

1. Document D1 (see page 3, lines 45-50; Examples, claim 1 and 2; page 4, line 36) discloses a filler ( $\text{CaCO}_3$ ) containing paper further comprising a polyvinylamine polymer within the range claimed obtained by hydrolysis of N-vinylformamide comprising polymer, as a fixing agent.

Claim 1 therefore lacks novelty; Art. 33(2) PCT.

2. Dependent claims 2,3 do not contain any features which, in combination with the features of claim 1 to which they refer, meet the requirements of the PCT in respect of inventive step, these features are general knowledge in the field.
3. For the assessment of the present claims on the question whether they are industrially applicable, no particular reasoning would appear necessary to give. The industrial application would appear to be evident (Art. 33(4) PCT).

## Amended Claims

1. A method for the production of filler-containing paper by dewatering a pulp in the presence of a cationic polymer containing vinylamine units and a filler to obtain an ash content of the paper of 3-40 wt%, which is characterized in that
- 5
- (A) at least 0.0005% but less than 0.05%, by conversion to solids concentration in terms of the pulp, of a polymer obtained by 20 to 100% hydrolysis of the total formyl groups in a polymer having at least N-vinylformamide as a polymerization component is added to the pulp slurry as a fixing agent for
- 10
- (B) titanium dioxide and/or calcium carbonate.
2. A method for the production of filler-containing paper according to Claim 1, which is characterized in that component (A) and component (B) described in Claim 1
- 15
- are added to the pulp slurry such that the mass ratio of component (A) to component (B) is of proportions [component (A)/component (B)] = 0.001/100 to 0.5/100 by conversion to solids concentration.
3. Use of the filler-containing paper produced according to the method of Claim 1 or
- 20
- Claim 2 as a base paper for construction materials, India paper or tip base paper for cigarettes.